

REMARKS

Entry of the foregoing, re-examination and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.116.

All independent claims have been amended to specify that the allophanate or mixtures of allophanates are prepared from alkyl alcohols containing a linear C₄-C₈ chain. Support for this feature may be found on page 17, lines 11-13 of the specification. Claim 43 has been canceled with prejudice or disclaimer. Claims 24-42 and 44-58 will be pending in this application upon entry of the present amendments.

Claims 24-58 stand rejected under 35 U.S.C. §112, first paragraph, for the reasons set forth in paragraph (1) of the Office Action. Reconsideration of this rejection is respectfully requested for at least the following reasons.

Applicants reiterate their previous position that the scope of the term "true trimer" would be readily apparent to those of ordinary skill in this art based on their review of the present disclosure and the knowledge possessed by those skilled in this art. The term "true trimer" is defined in the prior art for reasons discussed in the Response filed January 16, 2004. Applicants have considered the Examiner's comments concerning U.S. Patent Nos. 6,653,432 and 6,492,456 and respectfully disagree. Those of ordinary skill in this art would clearly be apprised of the scope and meaning of "true trimer" as that term is used herein. The term has a recognized meaning in the art.

For at least the above reasons, the §112, first paragraph rejection should be withdrawn. Such action is respectfully requested.

Claims 24-58 were rejected under 35 U.S.C. §112, second paragraph, for the reasons given in paragraph (2) of the Office Action. Reconsideration and withdrawal of this rejection are requested for at least the following reasons.

Applicants have considered the Examiner's remarks regarding the term "derived isocyanate function" and request reconsideration. The objected to terminology is defined in the specification. Applicants disagree with the Examiner's position that the terminology is repugnant to the art recognized definition. The scope of the quoted terminology would be clearly recognized by those of ordinary skill.

Concerning claim 45, Applicants respectfully disagree with the Examiner's position. The process set forth in claims 40 and 45 is fully exemplified in working Examples 4-6. Applicants submit that the scope of claim 45 would readily be apparent to those of ordinary skill without specifying amounts of each product obtained in each step.

Finally, Applicants question why all claims are rejected on this ground. The term "derived isocyanate function" occurs only in claims 26 and 28. The second objection applies only to claim 45. Clarification is respectfully requested.

In view of the above, the rejection based on 35 U.S.C. §112, second paragraph, should be reconsidered and withdrawn.

Claims 46-50, 53 and 54 were rejected under 35 U.S.C. §102(b) as anticipated by EP 649866 for the reasons given in paragraphs (4) and (5) of the Office Action. Reconsideration of this rejection is respectfully requested in light of the following remarks.

In the present application, the inventors have surprisingly determined that the use of linear C₄-C₈ alkyl alcohols for the preparation of allophanate, leads to

polyisocyanate compositions having lowered viscosity as compared with polyisocyanate compositions comprising allophanates obtained from alcohols outside of the claimed range. This invention is not disclosed nor suggested in EP 649866. In this document, the comparison of viscosities are established between allophanate-free trimerizates (Allophanatgruppen-freien trimerisaten) and trimerizates comprising allophanate groups (see EP 649866, page 2, lines 45-47). Thus, nothing in this document would lead the skilled artisan to use allophanate groups prepared from C₄-C₈ linear alkyl alcohols in order to obtain lowered viscosities when mixed with trimerizates of polyisocyanates.

The unexpected result attained by using alkyl alcohols containing a linear C₄-C₈ chain in preparing allophanates is shown by the attached test data. The test data unambiguously show that polyisocyanate compositions according to the invention, i.e. a mixture of tricondensate polyfunctional isocyanates to which has been added an allophanate prepared with a linear C₄-C₈ alkyl alcohol, present a lowered viscosity, as claimed in the present invention. From the test results attached hereto, it can be readily concluded that allophanates prepared using alcohols out of the claimed range of C₄-C₈ alkyl alcohols, do not result in polyisocyanate compositions with similarly lowered viscosity. See, for example, test with ethanol (linear alcohol with two carbon atoms) and the test with 2-ethyl-hexanol (branched alkyl alcohol containing eight carbon atoms).

Respectfully, EP '866 does not constitute an anticipation of claims 46-50, 53 and 54, as currently amended. Accordingly, withdrawal of the §102(b) rejection is requested.

Claims 24-45, 51 and 52 were rejected under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 5,235,018 to Potter et al. or U.S. Patent No. 5,248,482 to Jacobs et al. or EP 649 866 for the reasons expressed in paragraphs (6)-(8) of the Office Action. Reconsideration of these rejections is requested for at least the following reasons.

Jacobs et al. '482 discloses the use of 1-butanol for the preparation of polyisocyanate compositions. However, in this disclosure, no consideration is given to the viscosities of the various compositions : examples 1 and 2 deal with polyisocyanate compositions where 1-butanol is used, but the two polyisocyanate compositions are solid at 25°C (See column 9, examples 1 and 2). Accordingly, the process and compositions disclosed by Jacobs et al. '482 are not anticipatory nor do they render obvious the present claims.

The disclosure by Potter et al. '018 is not relevant to the present invention. In this document, allophanate groups are formed from urethane groups which are based on the reaction product of an organic isocyanate and mono-alcohol containing at least 10 carbon atoms. Thus, the disclosure of this reference is not anticipatory nor does it render obvious the present claims.

The distinctions between EP '866 and the claimed invention have been set forth above in discussing the §102(b) rejection of claims 46-50, 53 and 54. The reference does not anticipate claims 24-45, 51 and 52 as currently amended nor does EP '866 render obvious the claimed invention particularly in view of the data shown in the attachment.

For at least the above reasons, the §102(b) and §103(a) rejections over Potter et al. '018, or Jacobs et al. '482, or EP '866 should be withdrawn. Such action is earnestly requested.

Claims 24-26, 28-41 and 43-58 were rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 4,837,359 to Woynar et al. for reasons set forth in paragraphs (9) and (10) of the Office Action. Reconsideration and withdrawal of this rejection are requested for at least the reasons which follow.

Woynar et al. '359 suggests the use of low molecular weight polyvalent alcohols to modify the flexibility, bonding, hydrolysis stability, hardness and/or solvent stability of polyisocyanate compositions. There is no teaching or suggestion in this disclosure to use linear C₄-C₈ alkyl alcohols to prepare a mono-allophanate in order to lower the viscosity of polyisocyanate compositions. See, e.g., Example 4 where 2,2-dimethyl-propanediol-1,3, a branched diol containing 5 carbon atoms, is used resulting in a viscosity of 18,900 mPa.s.

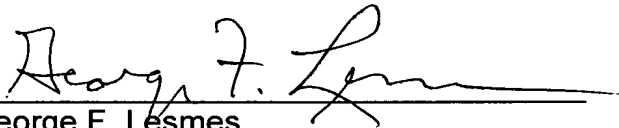
Accordingly, this reference fails to render obvious the presently amended claims. The §103(a) rejection based on Woynar et al. '359 is inapplicable and should be withdrawn.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order and such action is respectfully requested. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at (703) 838-6683 at his earliest convenience.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

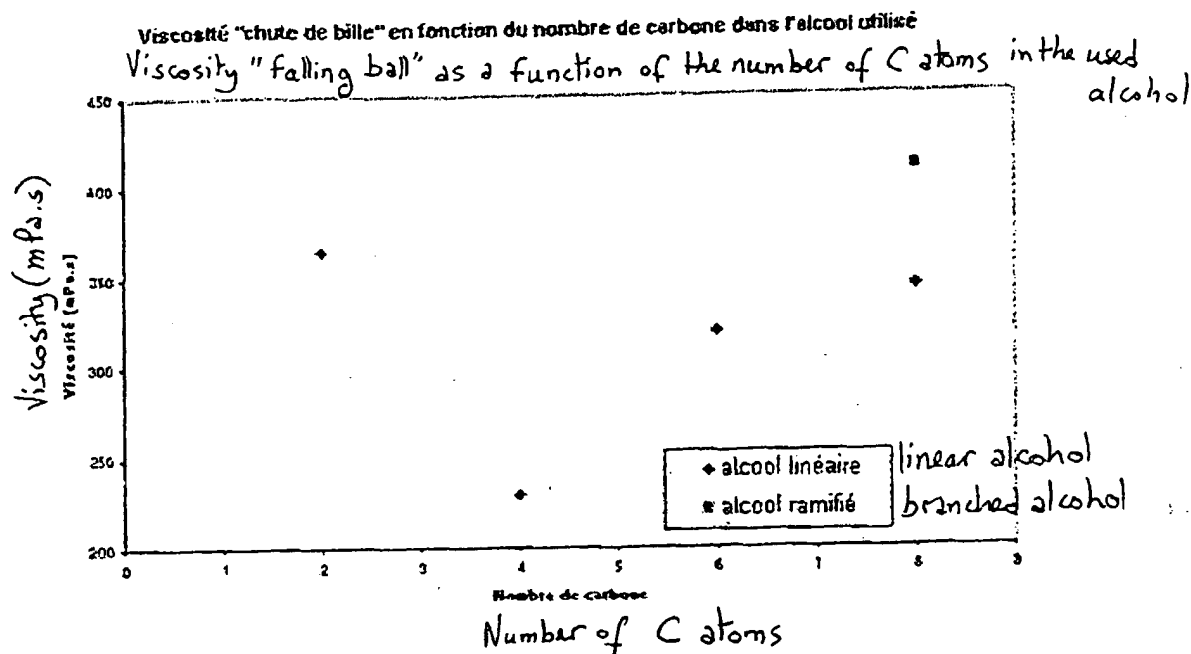
Date: January 28, 2005

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Test #	Type of alcohol nature alcool	Number of C atoms nb de C	Viscosity (mPa.s) visco (mPa.s)
04GYT0199	butanol	4	229
04GYT0200	2° ethyl hexanol	6	410
04GYT0201	ethanol	2	364
04GYT0202	octanol	8	344
04GYT0203	hexanol	6	319



Pour un même ratio molaire $\text{NCO} / \text{OH} = 7$ et avec l'hexaméthylène diisocyanate (HDI) comme monomère diisocyanate.

For a same molar ratio $\text{NCO} / \text{OH} = 7$ using hexamethylene diisocyanate (HDI) as diisocyanate monomer.